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First Named Inventor	Sam H. Hay
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Examiner Name	Choobin, Barry

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Firm or Individual name	Mark Clodfelter
Signature	*Mark Clodfelter*
Date	Jan. 24, 2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: Sam H. Hay
Application number: 10/037,732
Filed: 11/09/2002
For: METHODS FOR DETERMINING BINOCULAR
     BALANCE AND DISORDERSOF BINOCULARITY
     OF AN INDIVIDUALOR CLINICAL GROUPS OF INDIVIDUALS
Docket no: HAYPAT7
GAU: 2625
Examiner: Choobin, Barry

RESPONSE TO RESTRICTION REQUIREMENT AND PRELIMINARY AMENDMENT

Responsive to the restriction requirement mailed 12/22/2004,

Applicant provisionally elects for prosecution the invention of group 1 (claims 1

- 17).

In addition, claim 18 is amended to require use of the "digital imaging

device" of claim 1, thus making it a linking claim.

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Claims in the case and their status follow:

1   1 (original). A method for determining optical status of each individual eye of a

2   pair of eyes of a subject comprising the steps of:

3   A) imaging both of said pair of eyes using a digital imaging device

4   while utilizing a standard set of uniform imaging conditions and visual tasks

5   while performing said imaging,

6   B) isolating a retinal reflex from each of said pair of eyes,

7   C) applying a series of algorithms to statistically determine a plurality

8   of parameters related to each said retinal reflex.

1   2 (original). A method as set forth in claim 1 further comprising the step of

2   establishing validity of a subsequent analysis of image data by determining the

3   monocular state of fixation of each of said pair of eyes.

1   3 (original). A method as set forth in claim 1 further comprising the step of

2   reducing the image data to a common clinical state, whereby valid

3   mathematical manipulation of image data either as individual or composite

4   group measurements is permitted.

1   4 (original). A method as set forth in claim 3 further comprising the step of

2   collecting all data from a plurality of subjects in the same manner and utilizing

3   a reproducible visual task, and achieving and confirming that each said

4   subject's gaze is in " Optimal Visual Perception".

1   5 (original). A method as set forth in claim 1 further comprising the step of

2   comparing said plurality of parameters from each said retinal reflex taken from

3   said individual to a like set of parameters taken from a normal eye.

1   6 (original). A method as set forth in claim 1 further comprising the step of

2   comparing said plurality of parameters from each said retinal reflex taken from

3   said individual to a like set of parameters taken from a normal eye.

1   7 (original). A method as set forth in claim 1 further comprising the step of

2   comparing said plurality of parameters from one of said retinal reflexes taken

3   from said individual with parameters from the other of said retinal reflexes

4   taken from said individual.

1   8 (original). A method as set forth in claim 2 further comprising the step of

2   presenting said plurality of parameters from one of said retinal reflexes taken

3   from said individual and said parameters taken from a normal retinal reflex in

4   a circular graphical format.

1   9 (original). A method as set forth in claim 6 further comprising the step of

2   superimposing said plurality of parameters from one of said retinal reflexes

3   taken from said individual over said parameters taken from a normal retinal

4   reflex.

1   10 (original). A method as set forth in claim 6 further comprising the step of

2   calculating a range of said parameters taken from a normal retinal reflex and

3   superimposing said plurality of parameters from one of said retinal reflexes

4   taken from said individual over said range of said parameters taken from said

5   normal retinal reflex.

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1   11 (original). A method as set forth in claim 5 further comprising the steps

2   presenting said plurality of parameters from one of said retinal reflexes taken

3   from said individual and said parameters from the other of said retinal reflexes

4   taken from said individual in a circular graphical format, with said parameters

5   from one of said retinal reflexes arranged on one side of said circular graphical

6   format and said parameters from the other of said retinal reflexes arranged

7   symmetrically on the other side of said circular graphical format.

1   12 (original). A method as set forth in claim 1 further comprising the step of

2   selecting said algorithms based on their predictivity of eye disorders.

1   13 (original). A method as set forth in claim 1 further comprising the step of

2   selecting said algorithms based on their predictivity of ocular balance between

3   said retinal reflexes.

1   14 (original).   A method for determining disorders of eyes of a subject

2   comprising the steps of:

3   A) obtaining a retinal reflex in digital format from each of said eyes,

4   B) performing a series of statistical calculations on each said retinal

5   reflex, said statistical calculations performed on selected areas of each said

6   retinal reflex,

7   C) comparing said statistical calculations taken from one said retinal

8   reflex with the same statistical calculations taken from a normal eye reflex or a

9   known data distribution from some disease or ocular state,

10   D) plotting results from said step of comparing so that certain eye

11   disorders that may be present in said subject are evident in said plot.

1   15 (original). A method as set forth in claim 14 further comprising the step of

2   plotting said results in a circular plot, with said statistical calculations taken

3   from one said retinal reflex arranged along one side of said circular plot and

4   said statistical calculations taken from the other said retinal reflex positioned

5   on the other side of said circular plot, with identical statistical calculations

6   from each said retinal reflex being in opposed relation.

1   16 (original). A method for determining disorders of eyes of a subject

2   comprising the steps of:

3   A) obtaining a retinal reflex in digital format from each of said eyes,

4   B) performing a series of statistical calculations on each said retinal

5   reflex, said statistical calculations performed on selected areas of each said

6   retinal reflex,

7   C) comparing said statistical calculations taken from one said retinal

8   reflex with the same statistical calculations taken from a normal eye reflex or a

9   known data distribution from some disease or ocular state,

10   D) plotting results from said step of comparing so that certain eye

11   disorders that may be present in said subject are evident in said plot.

1   17 (original). A method as set forth in claim 16 further comprising the step of

2   plotting said statistical calculations taken from a normal eye reflex in a circular

3   plot, with said statistical calculations taken from one of said retinal reflexes of

4   said subject being superimposed over said plot of said statistical calculations

5   taken from a normal eye.

1   18 (currently amended). A method for statistically determining a plurality of

2   values of generic disease groups, and comprising the steps of:

3   A) obtaining photometric imaging readings using the digital imaging

4   device of claim 1 of wavefront ocular images using uniform imaging

5   circumstances for each of said wavefront ocular images, said wavefront ocular

6   images taken from persons with clinically known disease processes,

7   B) Grouping persons with similar disease processes or associated

8   ocular states together in clinical subgroups,

9   C) Summing values of those identical algorithms found in said

10   clinical sub-groups to obtain statistical measurements and then performing a

11   statistical analysis on said statistical measurements to obtain statistical data,

12   D) Utilizing said statistical data to define features in graphic format

13   that characterizes values of the sub-group with a particular disease.